

FURTHER NOTES ON THE GENUS *RHAGOVELIA*

Hemiptera, Veliidæ

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Since the publication of "Notes on the Genus *Rhagovelia*, with Descriptions of Six New Species" in Proc. Biol. Soc. Wash., Vol. 40, 1927, pp. 131-138, the writers have received for study numerous specimens of American water-striders. This paper deals with the genus *Rhagovelia* and contains the description of one new species with new data on the distribution of several other species.

***Rhagovelia reposita*, Drake and Harris, sp. nov.**

Blackish brown, somewhat paler beneath, clothed on legs, sides of body, and genital segments with long, brown hairs. A large triangular patch at the base of each hemelytron and a smaller oval spot on the membrane, silvery whitish; sides of pronotum in front broadly silvery, this becoming more or less flavous toward the median line above. Pronotum strongly swollen between the humeri, coarsely pitted, with a very distinct median carina; the humeri prominent, somewhat tubercular, and each terminating in a large blunt spine; the base triangular, its margin somewhat pale, carinate, and ending in a produced, acute point. Head produced in front of eyes and sloping obliquely downward, with distinct impressed median line, the vertex also with two short, oblique, impressed lines on each side above. Antennæ long, dark brown, finely pilose, the basal segment with a few scattered setæ; segment I distinctly curved, stoutest, III and IV slenderer and slightly paler than the others, IV faintly curved; proportion of segments, I:II:III:IV=50:44:33:26.

Rostrum testaceous, the apex black, not quite reaching middle of mesosternum. Prosternum and mesosternum with a broad longitudinal sulcus; metasternum strongly tumid, its hind margin broadly angular. Venter prominently carinate. Connexivum somewhat flavous, strongly produced into a long pointed process at the apex. Legs brown, the coxæ and trochanters flavous. Hemelytra blackish, the silvery markings at the base forming an interrupted transverse band, the veins darker. Length, 9.1 to 9.8 mm.; width, 2.8 to 3 mm.

*Apterous form:* Pronotum less tumid, rounded behind, the median carina terminating behind in a strongly produced point. Abdomen somewhat silvery pubescent on each side at the base above, clothed with short, very fine hairs.

*Male:* Venter carinate throughout, the last segment with a broad sulcus on each side of the carina, the latter very high and thicker along the basal third and there produced into a backward projecting tubercle; the apical margin forming a distinctly raised U-shaped, plate-like structure into which the raised area of the first genital

segment fits. First genital segment cylindrical, strongly curved downward posteriorly, longitudinally furrowed behind, the distal margin terminating at the middle in a broad triangular projection, the raised ridge on each side of the sulcus (a little in front of hind margin) produced into an oblique, broad, flat, black-margined, spine-like projection. Terminal segment with an elevated, three-pointed process above. Clasper long, forming a stout hook with a prominent, flattened spine-like projection near the base of the stem. Legs long; the posterior femora very strongly incrassate, thickest before the middle and armed within with several irregular rows of stout, variable sized, blunt, black spines; hind tibiae also with prominent, shorter spines; hind trochanters finely dentate.

*Female*: Venter with the carina becoming obsolete posteriorly, the last segment slightly more than a half longer than the preceding one, its hind margin slightly produced in the middle. Last abdominal segment above produced on each side into a prominent, hairy, finger-like process. Posterior femora slightly swollen, armed within with a row of black spines, two or three of which, on the distal half, are very long.

*Holotype*, winged male, *allotype*, winged female, *morphotype*, wingless male, and *paratypes*, many males and females, Chiquimula, Guatemala, 1930, in author's collection. This species may be separated from any known species by its size and the characters of the pronotum, venter, and genitalia. It should be noted that there is a slight variation in the size of the humeral spines of the pronotum.

#### RHAGOVELIA ARMATA Burmeister

Chiquimula, Guatemala. Four specimens,—one macropterous male, two apterous males, and one apterous female.

#### RHAGOVELIA COLLARIS Burmeister

Numerous specimens, Chiquimula, Guatemala, and one winged male, Horse Ranch Canyon, Arizona, J. A. Kartchner, collector. In the male the hind legs show a considerable amount of variability in the degree of incrassateness of the femora and a corresponding variation in the shape of the tibiae. In those specimens with the less incrassate femora the tibiae are nearly straight. The pronotum is clothed with short, fine, golden pubescence.

#### RHAGOVELIA WHITEI Breddin

Many specimens, Chapada, Brazil, H. E. Summers' collection, Iowa State College.

## RHAGOVELIA EXCELLENTIS Drake and Harris

In addition to the type series specimens are at hand from Boulder and Ft. Collins, Colorado, E. R. Becker and from Las Cruces, New Mexico, C. D. Lebert.

## RHAGOVELIA SPINIGERA Champion

Many winged and wingless males and females are at hand from Balsas and Cuernavaca, Mexico; San Jose, Costa Rica; and Chiquimula, Guatemala.

## RHAGOVELIA HIRTIPES Drake and Harris

*Macropterous female*: Antennal proportion, 22:13:14:14. Mesosternum with a raised, inverted V-shaped ridge which is clothed with long fine hairs. Apex of abdomen beset with long hairs.

*Macropterous male (allotype)*: Antennæ as in female. Pronotum with a rather distinct median carina, the apex narrowly rounded and clothed with long hairs. Hind femora short, moderately to strongly incrassate, densely clothed with long hairs, armed within before the middle with a long yellowish-brown spine which is followed by several smaller, black-tipped spines. Hind tibiæ straight, closely dentate within. Last ventral segment a little longer than the preceding one, very strongly impressed behind, the margins of the impression densely hairy. First genital segment strongly curved downward posteriorly. Clasper short, broadest near the base, narrowed and abruptly bent beyond the middle to form a distinct hook.

*Apterous form*: Pronotum without carina, the posterior margin broadly rounded. Male narrowed posteriorly, the legs more strongly incrassate. Female with a rather prominent tuft of hairs on the first abdominal segment above.

Numerous specimens from Chiquimula, Guatemala. Heretofore known only from the holotype, a macropterous female, from San Pedro, Honduras. The pronotum is provided with a few fine, inconspicuous deep punctures.

## RHAGOVELIA ELEGANS Uhler

Several specimens, Grenada, West Indies, H. E. Summers, collector. These specimens represent type material.

## RHAGOVELIA ANGUSTIPES Uhler

Numerous examples, Grenada, British West Indies.

## RHAGOVELIA PLUMBEA Uhler

Grenada, West Indies, and a very fine series from Honduras.